INDEX TO VOL. X (A)

AUTHORS' INDEX

Ananthanarayanan, N. ..	Diffraction of light by a thin metallic half-plane, 477.
Ananthasubrahmanyam, C. K.	*See* Salaruddin and Ananthasubrahmanyam.
Auluck, F. C. ..	On Poncelot polygons, 342.
Bapayya, K. ..	A study of the continuous wings occurring in Raman effect, 253.
Barve, P. M. ..	*See* Nabar and others.
Bhabha, H. J. ..	Classical theory of electrons, 324.
Bhabha, H. J., Carmichael, H., and Chou, C. N.	Production of bursts and the spin of the meson, 221.
Bhaduri, Bhutnath ..	*See* Singh and Bhaduri.
Bhagavantam, S. ..	On the occurrence of overtone lines in Raman effect, 224.
Bhatnagar, S. S., Kapur, P. L., and Kaur, Gurbaksh	Photopolymerisation of anthracene in ben zene solution from the magnetic standpoint, 468.
Bhatnagar, S. S., Kapur, P. L., and Mittal, Girdharilal	Magnetic properties of copper amalgams, 45.
Bhatnagar, S. S., Prakash, Brahm and Maheshwari, Jai Chand	Magnetism and molecular constitution of some manganese compounds, 150.
Bhimasenachar, J. ..	A modified method of using Poiseuille's apparatus, 141.
Buksh, Wahid, and Desai, R. D.	Heterocyclic compounds, Part X. The synthesis of substituted 1 : 2 : 3 : 4-tetrahydroacridones, 262.
Carmichael, H. ..	*See* Bhabha and others.
Chiplonkar, M. W. ..	Measurements of atmospheric ozone at Bombay, 105.
Chiplonkar, V. T. ..	Rectification in discharge tubes, 381.
Chou, C. N. ..	*See* Bhabha and others.

Desai, B. N. .. *See* Nabar and others.

Desai, R. D. .. *See* Buksh and Desai.

Dharam Dass, Ione Nitravati — *See* Dutt and Dharam Dass.

Dutt, S., and Dharam Dass, Ione Nitravati — Colour in relation to chemical constitution of the organic and inorganic salts of isonitroso-pyrazolones and isooxazolones, 55.

Govindarajan, S. R. .. *See* Rao and Govindarajan.

Iyengar, K. S. K. .. A new proof of the formula for the generating function of Laguerre polynomials and other related formulæ, 181.

A new proof of Mehler's formula and other theorems on Hermitian polynomials, 211.

Iyengar, N. V. Rangaswamy, and Rao, Basrur Sanjiva — Interfacial tension studies on mercury in reacting systems, 20.

Kapur, P. L. .. *See* Bhatnagar and others.

Kasbekar, G. S., and Normand, A. R. — Reaction between nitric acid and tin in presence of catalysts—Part II, 37.

Kaur, Gurbaksh .. *See* Bhatnagar and others.

Krishnan, R. S. .. Scattering of polarised light in colloids, 395.

Maheshwari, Jai Chand .. *See* Bhatnagar and others.

Manzur, Mohammad, and Pandya, K. C. — The condensation of aldehydes with amides, Part V. Of *p*-hydroxybenzaldehyde, 282.

Mehra, Rup Kishore, and Pandya, K. C. — The condensation of aldehydes with amides, Part IV. Of *m*-hydroxybenzaldehyde, 279; Part VI. The condensations of *o*-, *m*- and *p*-methoxybenzaldehydes, 285.

Mittal, Girdharilal .. *See* Bhatnagar and others.

Moessner, Alfred .. Einige Numerische Identitäten, 296.

Moghe, D. N. .. On a simple system of charged particles in Milne's kinematical theory, 31.

On the stability of motion in Milne's kinematical system, 41.

On isotropic manifolds in the theory of relativity, 275.

On the stability of equilibrium of an isolated fluid sphere, 399.

Moghe, D. N. .. On some non-static solutions of Einstein's gravitational equations, and fluid spheres with the pressure and density as slowly varying functions of time, 407.

Moses, P. A. .. Raman spectra of fused nitrates, 71.

Murti, P. Bhaskara Rama, and Seshadri, T. R. Chemical composition of Indian senna leaves (*Cassia angustifolia*), 96.

Murty, G. V. L. N., and Seshadri, T. R. Raman effect and chemical constitution. Influence of constitutive and other factors on the double bonds in organic compounds. Part II—Effect of the phenyl group on the carbonyl bond in esters, 307.

Nabar, J. A., Barve, P. M., Patel, A. M., and Desai, B. N. Adsorption of naphthols in the presence of different electrolytes and peptising agents and at different temperatures, 344.

Nedungadi, T. M. K. .. Effect of crystal orientation on the Raman spectrum of sodium nitrate, 197.

Normand, A. R. .. *See* Kasbekar and Normand.

Pandya, K. C. .. *See* Manzur and Pandya.

See Mehra and Pandya.

Paramasivan, S. .. The Pallava paintings at Conjeevaram—an investigation into the methods, 77.

The wall paintings in the Bagh caves—an investigation into their methods, 85.

Technique of the painting process in the rock-cut temples at Badami, 145.

Patel, A. M. .. *See* Nabar and others.

Pillai, S. S. .. On normal numbers, 13.

On the smallest prime of the form $km+1$, 388.

On the number of representations of a number as the sum of the square of a prime and a squarefree integer, 390.

On numbers which are not multiples of any other in the set, 392.

Prakash, Brahm .. *See* Bhatnagar and others.

Rajagopalan, V. S. .. *See* Raman and Rajagopalan.

Raman, C. V., and Rajagopalan, V. S. Haidinger's rings in soap bubbles, 317.

Rangaswami, S., and Seshadri, T. R.		3-Benzoyl-7-hydroxyflavone, 6.
Rao, Basrur Sanjiva	..	*See* Iyengar and Rao.
		Studies in the chemical behaviour of sulphur compounds. Part I—The hydrolysis of sulphur chloride, 423 ; Part II—Disulphur oxide, 491.
Rao, B. S. Madhava	..	Quantum mechanical interpretation of a result concerning Hermite polynomials, 217.
Rao, B. Sundara Rama	..	Raman effect in relation to crystal structure—I. Calcite and sodium nitrate, 167.
Rao, N. V. Subba, and Seshadri, T. R.		Use of mercuric acetate in organic preparations—Part I. Mercury compounds of amides and imides, 1.
Rao, N. V. Subba, Veerabhadrarao, J., and Seshadri, T. R.		A note on the preparation and reactions of Karanjin, 65.
Rao, P. Suryaprakasa, Sastri, V. D. Nageswara, and Seshadri, T. R.		Geometrical inversion in the acids derived from the coumarins—Part VII. The behaviour of acetyl coumaric acids, 267.
Rao, S. Ramachandra, and Govindarajan, S. R.		The crystal diamagnetism of tellurium, 235.
Saksena, Bishambhar Dayal		The complete Raman spectrum of glycerine, 333.
		Raman and infra-red spectra of cyclopropane, 449.
Salaruddin, M., and Ananthasubrahmanyam, C. K.		The bright solar eruption of March 3, 1939, 9.
Sastri, V. D. Nageswara	..	*See* Rao and others.
Sastry, B. S.	..	Note on a type of generalised Laguerre polynomial, 176.
Seshadri, T. R.	..	*See* Murti and Seshadri.
		See Murty and Seshadri.
		See Rangaswami and Seshadri.
		See Rao and others.
		See Rao and Seshadri.
Sharma, V.	..	*See* Siddiqui and Sharma.
Siddiqui, S., and Sharma, V.		Studies in the conessine series—Part V. Reduction of nitro-conessine to conessine-oxime and conversion of the oxime to mono-oxy-conessine, 417.

Singh, B. K., and Bhaduri, Bhutnath — Studies on the dependence of optical rotatory power on chemical constitution—Part XVI. Bromo-, and iodo-, aryl derivatives of stereo isomeric methylenecamphors, 359.

Srinivasan, P. S. .. Ultra-violet irradiation of rubber, 186.

Subbaramaiah, K. .. Studies in colloid optics—III. Scattering of light by stearic acid hydrosols and by sodium stearate sols and gels, 289.

Thiruvenkatachar, V. R. .. Note on some formulæ involving the Laguerre and Hermitian polynomials and Bessel functions, 229.

Veerabhadrarao, J. .. *See* Rao and others.

Venkataraman, K. S. .. The adiabatic Piezo-optic coefficients of water and the alcohols, 121.

Venkateswarlu, K. .. Polarization of Raman lines in relation to molecular structure : $SOCl_2$, CH_3Cl and BCl_3, 156.

Vijayaraghavan, T. .. On the irrationality of a certain decimal, 341.

Vrkljan, V. S. .. Ein Versuch der Erweiterung des Krishnan'—Schen Reziprozitätsgesetz Esfür Schiefe Beobachtungsebenen, 16.

TITLE INDEX

Adiabatic Piezo-optic cœfficients of water and the alcohols (Venkataraman), 121.

Adsorption of naphthols in the presence of different electrolytes and peptising agents and at different temperatures (Nabar and others), 344.

Aldehydes, condensation, with amides, IV, VI (Mehra and Pandya), 279, 285.

Aldehydes, condensation, with amides, V (Manzur and Pandya), 282.

Atmospheric ozone at Bombay, measurements (Chiplonkar), 105.

3-Benzoyl-7-hydroxyflavone (Rangaswami and Seshadri), 6.

Colloid optics, studies, III (Subbaramaiah), 289.

Conessine series, studies, V (Siddiqui and Sharma), 417.

Decimal, certain, on the irrationality (Vijayaraghavan), 341.

Diamagnetism, crystal, of tellurium (Rao and Govindarajan), 235.

Diffraction of light by a thin metallic half-plane (Ananthanarayanan), 477.

Einstein's gravitational equations, and fluid spheres with the pressure and density as slowly varying functions of time, on some non-static solutions (Moghe), 407.

Electrons, classical theory (Bhabha), 324.

Equilibrium of an isolated fluid sphere, on the stability (Moghe), 399.

Geometrical inversion in the acids derived from the coumarins, Part VII (Rao and others), 267.

Haidinger's rings in soap bubbles (Raman and Rajagopalan), 317.

Hermite Polynomials, quantum mechanical interpretation of a result concerning (Rao), 217.

Heterocyclic compounds, Part X (Buksh and Desai), 262.

Indian Senna leaves (*Cassia angustifolia*) chemical composition of (Murti and Seshadri), 96.

Interfacial tension studies on mercury in reacting systems (Iyengar and Rao), 20.

Isonitroso-pyrazolones and iso-oxazolones, organic and inorganic salts, colour in relation to chemical constitution (Dutt and Dharam Dass), 55.

Karanjin, a note on the preparation and reactions (Rao and others), 65.

Laguerre and Hermitian polynomials and Bessel functions, note on some formulæ involving (Thiruvenkatachar), 229.

Laguerre polynomial, a type of generalised, note (Sastry), 176.

Laguerre polynomials and other related formulæ, generating function, a new proof of the formulæ (Iyengar), 181.

Magnetic properties of copper amalgams (Bhatnagar and others), 45.

Magnetism and molecular constitution of some manganese compounds (Bhatnagar and others), 150.

Mehler's formula and other theorems on Hermitian Polynomials, a new proof (Iyengar), 211.

Mercuric acetate in organic preparations, use, I (Rao and Seshadri), 1.

Meson, production of bursts and the spin (Bhabha and others), 221.

Milne's kinematical system, on the stability of motion (Moghe), 41.

Milne's kinematical theory, on a single system of charged particles (Moghe), 31.

Nitric acid and tin, reaction, in presence of catalysts, II (Kasbekar and Normand), 37.

Number, on the number of representations of, as the sum of the square of a prime and a squarefree integer (Pillai), 390.

Numbers, normal (Pillai), 13.

Numbers which are not multiples of any other in the set (Pillai), 392.

Numerische identitäten, einige (Moessner), 296.

Optical rotatory power, studies on the dependence, on chemical constitution, XVI (Singh and Bhaduri), 359.

Painting process in the rock-cut temples at Badami, technique (Paramasivan), 145.

Pallava paintings at Conjeevaram—an investigation into the methods (Paramasivan), 77.

Photopolymerisation of anthracene in benzene solution from the magnetic standpoint (Bhatnagar and others), 468.

Poiseuille's apparatus, a modified method of using (Bhimasenachar), 141.

Poncelot polygons (Auluck), 342.

Prime, smallest, of the form $km+1$ (Pillai), 388.

Raman and infra-red spectra of cyclopropane (Saksena), 449.

Raman effect and chemical constitution. Influence of constitutive and other factors on the double bonds in organic compounds, II (Murty and Seshadri), 307.

Raman effect, a study of the continuous wings occurring in (Bapayya), 253.

Raman effect in relation to crystal structure I (Rao), 167.

Raman effect, on the occurrence of overtone lines (Bhagavantam), 224.

Raman lines in relation to molecular structure, polarization (Venkateswarlu), 156.

Raman spectra of fused nitrates (Moses), 71.

Raman spectrum of glycerine, complete (Saksena), 333.

Raman spectrum of sodium nitrate, effect of crystal orientation (Nedungadi), 197.

Rectification in discharge tubes (Chiplonkar), 381.

Relativity, theory, isotropic manifolds (Moghe), 275.

Reziprozitätsgesetz Krishnan'—schen, ein Versuch der Erweiterung (Vrkljan), 16.

Scattering of polarised light in colloids (Krishnan), 395.

Solar eruption of March 3, 1939, bright (Salaruddin and Ananthasubrahmanyam), 9.

Sulphur compounds, studies in the chemical behaviour, I, II (Rao), 423, 491.

Ultra-violet irradiation of rubber (Srinivasan), 186.

Wall paintings in the Bagh caves, an investigation into their methods (Paramasivan), 85.

Errata

Vol. X, No. 5, November 1939—

On page 367, Table XII, under *c*, against Li 6708 *read* 173·5 *for* 173.

On page 374, Table XXVI, under *c*, against Li 6708 *read* 160·5 *for* 160·7.

Page 409, line 12, *read* "with the assumption" *instead of* "with the D. N. Moghe assumption".

Page 416, Equation (71), *read* $ar_b^2 - Tr_b + 2\alpha T^2 + 2\beta T = 0$ *instead of* $s\pi_b^2 - Tr_b + 2\alpha T^2 + 2\beta T = 0$.